

## **REMARKS**

In view of the above amendments and the following remarks, reconsideration of this application is respectfully requested.

### **Status of the Claims**

Upon entry of the amendments presented herein, claims 1-20 will be pending. Claim 10 is hereby amended. New claims 14-20 are hereby added. Claims 1-9 and 11-13 stand withdrawn.

### **Support for Claim Amendments**

As set forth below, no new matter has been added by way of the amendments to claim 10 and the addition of new claims 14-20.

Support for the amendments to claim 10 is found in original claim 2.

Support for newly added claim 14 is found in original claim 3.

Support for newly added claim 15 is found in original claim 4.

Support for newly added claim 16 is found in original claim 5.

Support for newly added claim 17 is found in original claim 6.

Support for newly added claim 18 is found in original claim 5.

Support for newly added claim 19 is found in original claim 6.

Support for newly added claim 20 is found in original claim 1.

### **Claim of Foreign Priority Benefit**

The Examiner has acknowledged applicants' claim of priority benefit to Japanese Patent Application No. JP 2004-044759, filed February 20, 2004. However, in order to be accorded full benefit of priority to JP 2004-044759, the Examiner has indicated that applicants must submit a certified copy of JP 2004-044759 and may also be required to submit an English translation thereof.

In reply, applicants are submitting herewith both a certified copy of JP 2004-044759 and a verified English translation thereof. Therefore, applicants respectfully request that the present application be accorded full benefit of priority to JP 2004-044759.

### **Objection to the Drawings**

The Examiner has objected to Figure 6 as allegedly including a reference number that is not described in the specification. In particular, the Examiner has taken the position that reference number “1a” in Figure 6 is not described in the specification (*see* Office Action, at page 4, paragraph 8).

Applicants respectfully point the Examiner to the originally filed specification at line 22 of page 43, which clearly identifies reference number “1a” as corresponding to “stem and loop structures.” In particular, in reference to Figure 6, the specification includes the following relevant statement: “In the DNA fragments, the stem and loop structures **1a** are maintained” (specification, at page 43, lines 21-22) (emphasis added).

In view of the foregoing, applicants respectfully submit that the objection to the drawings is improper and should be withdrawn.

### **Objection to the Specification**

The Examiner has objected to the specification for containing embedded hyperlinks an/or other forms of browser-executable code.

In reply, applicants have deleted the only embedded hyperlink found by applicants in the specification. In particular, in compliance with MPEP § 608.01(VII), applicants have deleted the “<http://www.monoliths.com/>” hyperlink appearing at page 59, line 23 of the specification by deleting the “http://” prefix.

Therefore, applicants respectfully submit that this objection is traversed in view of the above amendments to the specification.

### **Rejection Under 35 U.S.C. § 102(a)**

Claim 10 is rejected under 35 U.S.C. § 102(a) for allegedly being anticipated by U.S. Patent Application Publication No. 2004/0086944 to Grigg et al. (published May 6, 2004) (“Grigg”).

The present application claims benefit of foreign priority to Japanese Patent Application No. JP 2004-044759, filed February 20, 2004. As noted previously, applicants are submitting herewith both a certified copy of JP 2004-044759 and a verified English translation thereof. Thus, the present application is entitled to full benefit of priority to JP 2004-044759.

Because JP 2004-044759 was filed prior to the publication date of Grigg, this rejection of claim 10 under 35 U.S.C. § 102(a) based on Grigg is improper and should be withdrawn.

### **Rejection Under 35 U.S.C. § 102(b)**

Claim 10 is rejected under 35 U.S.C. § 102(b) for allegedly being anticipated by U.S. Patent Application Publication No. 2004/0132048 to Martienssen et al. (published July 8, 2004) (“Martienssen ‘048”).

As noted above, the present application claims, and should be accorded full benefit of, foreign priority to Japanese Patent Application No. JP 2004-044759, filed February 20, 2004.

Because JP 2004-044759 was filed prior to the publication date of Martienssen ‘048, this rejection of claim 10 under 35 U.S.C. § 102(b) based on Martienssen ‘048 is improper and should be withdrawn.

### **Rejection Under 35 U.S.C. § 102(e)**

Claim 10 is rejected under 35 U.S.C. § 102(e) for allegedly being anticipated by U.S. Patent No. 7,186,512 to Martienssen et al. (effective filing date of June 26, 2002) (“Martienssen ‘512”).

Claim 10 has been amended to further define “the mixture of DNA fragments prepared in step (1)” of the claimed method of analyzing a modification in a DNA to be assayed.

In particular, claim 10, as amended, now recites that the mixture of DNA fragments prepared in step (1) is Mixture (a), (b), or (c).

As set forth below, Martienssen ‘512 does not teach or describe either of Mixtures (a), (b), or (c) as claimed in amended claim 10.

Mixture (a) of claim 10 is “obtained by digesting genomic DNA with a restriction enzyme which can digest a DNA regardless of the presence or absence of a modification.” An example of a restriction enzyme of Mixture (a) includes a methylation-insensitive restriction enzyme. By way of contrast, Martienssen ‘512 discloses the use of “a methyl-sensitive (or alternatively a methyl-dependent) restriction endonuclease” (column 9, lines 40-41), but **does not** disclose or teach the use of a methylation-insensitive restriction enzyme. Therefore, Martienssen ‘512 cannot be viewed as anticipating claim 10 with regard to Mixture (a).

Mixture (b) of claim 10 is a mixture of “single-stranded DNA fragments or partially single-stranded DNA fragments.” Mixture (c) of claim 10 is a mixture of “DNA fragments having a single-stranded region.” Therefore, in Mixtures (b) and (c) of claim 10, the DNA fragments to be analyzed have at least a single-stranded region. With respect to genomic DNA fragmentation, Martienssen ‘512 states the following:

As discussed above, in many embodiments, the starting genomic DNA is fragmented. Fragmentation can be performed by any method known to those of skill in the art (e.g., mechanically sheared, cleaved with a restriction enzyme or DNase I, etc.).

(column 9, lines 23-27). However, Martienssen ‘512 **does not** disclose or teach that the fragmented DNAs have a single-stranded region. Therefore, Martienssen ‘512 cannot be viewed as anticipating claim 10 with regard to Mixtures (b) and (c).

In view of the foregoing, applicants respectfully submit that the rejection of claim 10 under 35 U.S.C. § 102(e) based on Martienssen ‘512 is improper and should be withdrawn.

## CONCLUSION

Claims 1-20 are currently pending in this case. In view of the foregoing, applicants respectfully submit that the claims of the present application are in condition for allowance and such allowance is earnestly solicited.

If any unresolved issues remain that might prevent the prompt allowance of the present application, the Examiner is respectfully encouraged to contact the undersigned at the telephone number listed below to discuss these issues.

Because the present response is being submitted by the three-month shortened statutory period, no extension fee is required. However, the Commissioner is hereby authorized to charge any fees that may have been overlooked, or to credit any overpayments of fees, to Deposit Account No. 08-1935.

Respectfully submitted,

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By: /Andrew K. Gonsalves/

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